

**REMARKS**

This Amendment is filed in connection with the filing herewith of an RCE; and furthermore, it is responsive to the final Office Action dated May 22, 2008, and is respectfully submitted to be fully responsive to the rejections raised therein. Accordingly, favorable consideration on the merits and allowance are respectfully requested.

In the present Amendment, claim 1 has been amended to improve its form. Specifically, in claim 1, the titanium compound component (A) is limited to reaction products of titanium alkoxides represented by the formula (I) and aromatic polyvalent carboxylic acids or their anhydrides represented by the formula (II).

Claims 3, 4 and 11-17 have been withdrawn pursuant to 37 C.F.R. § 1.142(b) as being drawn to non-elected subject matter.

No new matter has been added. Entry of the Amendment is respectfully submitted to be proper. Upon entry of the Amendment, claims 1-17 are all the claims pending in the application.

Applicant appreciates that the Terminal Disclaimer filed on April 29, 2008, has been accepted and recorded.

**I. Response to Rejection Under 35 U.S.C. § 103(a)**

Claims 1, 2 and 5-10 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP Application 61-154204 ("Nakamura"), in view of U.S. 6,593,447 ("Yamamoto"), and in further view of U.S. 4,254,018 ("Kowallik"). Particularly, the Office

Action appears to take the position that Nakamura discloses a polyester yarn having a flat cross-sectional profile. The Office Action conceded that Nakamura fails to disclose, teach, or suggest a process of making the polyester fibers by polycondensation of an aromatic dicarboxylate ester in the presence of a catalyst, as recited in independent claim 1. According to the Office Action, however, Yamamoto assertedly cures the deficiency of Nakamura because Yamamoto assertedly teaches that polyester fibers can be produced by a polycondensation reaction in the presence of a catalyst comprising a titanium compound, an aromatic polyfunctional carboxylic acid, and a phosphorus compound.

The Office Action further conceded that Yamamoto does not disclose, teach, or suggest the use of the phosphorus compound of Formula (III) as recited in claim 1 (a reagent in mixture (1)). However, it was alleged that the phosphorus compound of Formula (III) is well known in the art. The Office Action further alleged that Kowallik cures the deficiencies of Yamamoto and Nakamura because, Kowallik assertedly teaches that a phosphonate of Formula (III), as recited in claim 1, can be used as heat stabilizing agent during a polyester polymerization process. (See Office Action at page 4, lines 5-8).

Applicant respectfully traverses and submits that the rejection should be withdrawn for the following reasons.

Applicant submits that the presently claimed invention is patentable over the art applied in view of the following remarks.

The modified cross-section polyester fibers of the presently claimed invention have the following features.

Feature (A): The polyester fibers of the present invention comprise, as principal components, a polyester polymer and a modified cross-section. The term “modified cross-section” represents an irregular cross-sectional profile. “Irregular cross sectional profile”, is a non-circular profile and a regular cross-sectional profile is a circular profile. Examples of irregular cross sectional profiles are described in the present specification on page 11, lines 1 to 6 and in Figs. 1, 2, 3, 5 and 8.

Feature (B): The polyester polymer is one produced by polycondensation of an aromatic dicarboxylate ester in the presence of a specific catalyst.

Feature (C): The catalyst comprises at least one ingredient selected from mixture (1) and reaction product (2) as defined in the amended claim 1.

The combination of features (A), (B) and (C) with each other enables the resultant modified cross-section polyester fibers to exhibit a good color tone and have no fluff. The fabrics formed from the modified cross-section polyester fibers exhibit a squeaky feel, have high bulkiness, high flexibility, and have a good light weight.

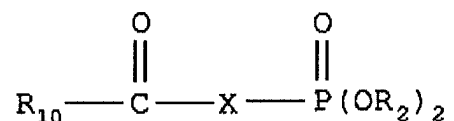
Applicant respectfully submits that Nakamura alone, or in view of Yamamoto and Kowallik, do not describe, teach, or suggest each element and limitation of the presently claimed invention in claim 1.

First, Nakamura discloses a polyester fiber having an irregular cross-sectional profile having a plurality of projections and a plurality of constructions. However, Nakamura does not disclose the presently recited catalyst as identified in Feature (C), above.

Yamamoto does not cure the deficiency of Nakamura. Yamamoto discloses a catalyst and a process for producing a polyester by using the catalyst. The catalyst enables the resultant polyester to have a good color tone, excellent forming property and a high resistance to cohesion of foreign substance around a melt-spinning orifice when the polyester is melt-spun. However, the catalyst described in Yamamoto contains, as a phosphorus compound component, an aryl or alkyl phosphonate, mono-, di- or tri-carboxyaryl phosphonate, aryl or alkyl phosphinate or carboxyaryl phosphinate, but not aryl or alkyl phosphate of the formula (IV).

Thus, the phosphorus compound component of Yamamoto is different from the phosphorus compound of the formulae (III) and (IV) in claim 1. Thus, the phosphorus compound component of the catalyst of Yamamoto does not teach or suggest the phosphorus compound component of the presently claimed invention. Accordingly, Yamamoto does not cure the deficiency of Nakamura.

Next, Kowallik does not cure the deficiencies of Nakamura or Yamamoto. Kowallik discloses a process for preparation of linear homo-polyester or co-polyester in the preparation of a polycondensation catalyst and a phosphonate of the formula:



The phosphonate compound disclosed in Kowallik is used as a heat stabilizer and not as a catalyst. Kowallik does not teach or suggest the use of the phosphonate compound as a reagent in a catalytic mixture.

Applicant respectfully submits that Kowallik, in fact, teaches away from the presently claimed invention because the polycondensation catalyst of Kowallik includes antimony oxide, germanium oxide, titanium methylate and other conventional titanium catalyst, as mentioned in column 6, lines 19 to 21 of Kowallik. According to Kowallik, catalysts used in polycondensation processes preferably comprise antimony oxide, germanium oxide or a mixture of the two. (See, Kowallik at column 6, lines 24 to 27). In Examples 1 to 14 of Kowallik, the polycondensation catalyst were  $\text{Sb}_2\text{O}_3$  and  $\text{GeO}_2$ . Thus, Kowallik does not teach or suggest the specific polycondensation catalyst as defined in the amended claim 1 of the present application.

Also, Kowallik is silent as to the irregular cross-sectional profile of the polyester fiber. Further, Kowallik is silent as to the specific advantages derived from the combination of features (A), (B) and (C) with each other. Thus, Kowallik does not render the presently claimed invention obvious.

None of these cited references describe, teach, suggest or provide other reasons for choosing the specific catalyst as recited in amended claim 1. Thus, no combination of the cited references with each other teaches or suggests the combination of Feature (C) with Features (A) and (B). The cited references teach polyester polymer having an improved forming property and heat stability. However, none of the cited references teach or suggest polyester fibers having no fluff in addition to a good color tone. Thus, these cited references do not render the presently claimed invention obvious.

Claims 2 and 5-10 depend from claim 1, either directly or indirectly, and are therefore patentable over claim 1 for at least the reasons mentioned above, with respect to the patentability

of claim 1. Accordingly, withdrawal of the rejection of claims 1, 2 and 5-10 is respectfully submitted to be proper.

## **II. Response to Double Patenting Rejection**

Claims 1-5 were provisionally rejected on grounds of non-statutory obviousness-type double patenting as being unpatentable over claims 1-20 of co-pending Application No. 10/541,574; and as being unpatentable over claims 1-15 of co-pending Application No. 10/535,419.

Applicant respectfully requests that these rejections be held in abeyance until patentable subject matter has been identified in one of the applications.

## **III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the local Washington, D.C. telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)  
U.S. Application No.: 10/542,048

Attorney Docket No.: Q89074

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

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**23373**

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